IN THE CLAIMS

1. (original) A method comprising:

scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data;

scanning the object with the CBVCT system without the beam pass array positioned between the x-ray source and the object to acquire image data; and

correcting the image data using the scatter data.

2. (original) A method in accordance with Claim 1 wherein said correcting comprises angularly interpolating at least one of the scatter data and the image data to correct for angular misalignment.

3. (original) A method in accordance with Claim 2 wherein said angularly interpolating comprises angularly interpolating the image data to correct for angular misalignment, said method further comprising angularly and spatially interpolating the scatter data to obtain a projection scatter estimate.

4. (original) A method in accordance with Claim 1 further comprising angularly and spatially interpolating the scatter data to obtain a projection scatter estimate.

5. (original) A method in accordance with Claim 4 wherein said correcting the image data comprises subtracting the projection scatter estimate from the image data on a pixel by pixel basis.

6. (currently amended) A method in accordance with Claim 1 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a

beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of openings therethrough, each opening spaced from other ~~opening~~ openings by at least 3 mm.

7. (original) A method in accordance with Claim 1 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at least 1 mm.

8. (original) A method in accordance with Claim 7 wherein said wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at least 1 mm comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of circular openings therethrough, each opening having a diameter of at most 2 mm.

9. (currently amended) A method in accordance with Claim 8 wherein said scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system and the object to acquire scatter data comprises scanning an object with a cone beam volumetric computed tomography (CBVCT) system with a beam pass array positioned between an x-ray source of the CBVCT system, wherein the beam pass array comprises a plate with a plurality of openings therethrough, each opening spaced from other ~~opening~~ openings by at least 3 mm.

10. (original) A cone beam volumetric computed tomography system comprising:

an x-ray source;

a detector positioned to receive x-rays emitted from said source; and

a beam pass array removably positioned between said source and said detector.

11. (currently amended) A system according to Claim 10 wherein said beam pass array comprises a plate with a plurality of openings therethrough, each opening spaced from other ~~opening~~ openings by at least 3 mm.

12. (original) A system according to Claim 11 wherein said opening comprise a plurality of circular openings, each said circular opening having a diameter of at least 1 mm.

13. (original) A system according to Claim 12 wherein each said circular opening having a diameter of at most 2 mm.

14. (original) A system according to Claim 13 wherein each said circular opening having a diameter of approximately 1.5 mm.

15. (original) A system according to Claim 10 further comprising a computer operationally coupled to said detector, said computer configured to:

receive scatter data from a scan of an object;

receive image data from a scan the object with the beam pass array removed; and

correct the image data using the scatter data.

16. (original) A system according to Claim 15 wherein said computer further configured to angularly interpolate at least one of the scatter data and the image data to correct for angular misalignment.

17. (original) A system according to Claim 16 wherein said computer further configured to angularly and spatially interpolate the scatter data to obtain a projection scatter estimate.

18. (original) A system according to Claim 16 wherein said computer further configured to correct the image data by subtracting the projection scatter estimate from the image data on a pixel by pixel basis.

19. (original) A computer readable medium encoded with a program configured to instruct a computer to:

receive scatter data from a cone beam scan of an object with a beam pass array present;

receive image data from a cone beam scan the object without the beam pass array present; and

correct the image data using the scatter data.

20. (original) A medium in accordance with Claim 19 wherein said program further configured to instruct the computer to angularly and spatially interpolate the scatter data to obtain a projection scatter estimate.

21. (currently amended) A medium in accordance with Claim 17 wherein said program further configured to instruct the computer to angularly interpolate the image data to correct for angular misalignment.